COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMIT
TO WITHDRAW GROUNDWATER
(FOR USE IN GROUNDWATER MANAGEMENT AREAS)

Permit Number: GW0044600
Effective Date: March 1, 2014
Expiration Date: February 29, 2024

Pursuant to Section 62.1-256 of the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) and the Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.), the STATE WATER CONTROL BOARD hereby authorizes

Permittee Captain's Cove Utility Company, Inc.

Address 2512 Captain's Corridor

Greenbackville, VA 23356

Facility Captain's Cove Utility Company, Inc.

to withdraw and use Groundwater in accordance with this permit and the application received August 22, 2001 and subsequently amended.

The permittee is authorized to withdraw 80,861,000 gallons per year.

The permittee shall comply with all requirements contained on this cover page, Part I - Permit Standards, Limitations, and Conditions, Part II - Special Conditions, the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia), and the Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.). Nothing in this permit or this regulation shall be construed to relieve the permittee of the duty to comply with all applicable Federal and State statutes and regulations.

The permitted withdrawal will be used to provide a public water supply for the Captain's Cove Subdivision and adjacent retail and commercial businesses. Other beneficial uses are not authorized by this permit.

Any noncompliance with permit conditions, the Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.) or the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) is a violation of the regulation and law, and is grounds for enforcement action, permit termination, revocation, amendment, or denial of a permit renewal application.

By direction of the STATE WATER CONTROL BOARD, this Permit is granted by:

Signed _____ Date 2/24/14

For the STATE WATER CONTROL BOARD

Part I
Permit Standards, Limitations and Conditions

1. The withdrawal of groundwater shall originate from the following withdrawal point(s):

Owner Well Name	DEQ Well #	Depth	Aquifer	Latitude	Longitude
Well #1	100-00165	290'	Middle Yorktown-Eastover	37°59' 22.0"	75° 25' 28.3"
Well #2	100-00031	200'	Upper Yorktown-Eastover	37°59' 40.9"	75° 25' 02.6"
Well #3	100-00039	270'	Middle Yorktown-Eastover	37°59' 22.0"	75° 25' 28.3"
Well #3U	100-01072	217'	Upper Yorktown-Eastover	38°0.0'11.6"	75° 25' 33.3"
Well #4	100-01020	295'	Middle Yorktown-Eastover	38°0.0'06.7"	75° 24' 36.8"

2. Withdrawals from the well system are limited as follows:

   In a calendar month: Total pumpage from these wells shall not exceed 13,048,000 gallons. The permittee shall report any amount in excess of the monthly withdrawal limit by the fifth day of the month following the month of over withdrawal.

3. Water use from each well and total system water use shall be recorded monthly and reported on forms provided by the Department of Environmental Quality (Department) to the Groundwater Withdrawal Permitting Program by the tenth day of each January, April, July and October for the respective previous standard quarter. Records of water use shall be maintained by the permittee as required in Section 9 VAC 25-610-130(F).

4. Permitted users shall install in-line totalizing flow meters to read gallons, cubic feet or cubic meters on each well prior to beginning the permitted use. Meters shall be tested in accordance with American Water Works Association (AWWA) Manual M-6, "Water Meters - Selection, Installation, Testing, and Maintenance". Such meters shall produce volume determinations within plus or minus 10% of actual flows. A defective meter or other device must be repaired or replaced within 30 days. A defective meter is not grounds for not reporting withdrawals. During any period when a meter is defective generally accepted engineering methods shall be used to estimate withdrawals and the period during which the meter was defective must be clearly identified in groundwater withdrawal reports.

5. Each permitted well shall be equipped in a manner such that water levels can be measured during pumping and non-pumping periods without dismantling any equipment. Any opening for tape measurement of water levels shall have an inside diameter of 0.5 inches and be sealed by a removable plug or cap. The permittee shall provide a tap for taking raw water samples from each permitted well.

6. The permittee shall not place a pump or water intake device lower than the top of the uppermost confined aquifer that a well utilizes as a groundwater source or lower than the bottom of an unconfined aquifer that a well utilizes as a groundwater source.

7. Each well that is included in this groundwater withdrawal permit shall have affixed to the well casing, in a prominent place, a permanent well identification plate that records the Department's well identification number, the groundwater withdrawal permit number, the total depth of the well and the screened intervals in the well, at a minimum. Such well identification plates shall be in a format specified by the Department and are available from the Department.

8. The Water Conservation and Management Plan as described in the application received August 22, 2001 and subsequently amended is incorporated into this permit and included as Attachment A. Requirements in the Plan shall have the same effect as any condition contained in this permit and may be enforced as such. Records of activities conducted pursuant to the Plan are to be submitted to Department upon request.

9. This permit may be reopened for the purpose of amending the conditions of the permit to meet new regulatory standards duly adopted by the State Water Control Board (Board).

10. A new permit application must be submitted 270 days before the expiration date of this permit.

11. A new permit application must be submitted 270 days prior to any proposed modification to this permit that will result in an increase of withdrawal above permitted limits or violate the terms and conditions of this permit.

12. This permit may be reopened for amendment, transfer, or revocation as described in Part VI of the Ground Water Withdrawal Regulations (9 VAC 25-610-290 through 9 VAC 25-610-330).

13. The permittee must notify the Department in writing and obtain staff approval of any change in the status, construction or pump setting of wells included in this permit. A revised GW-2 form must be submitted to the Department within 30 days in the event that the physical construction of a well is altered or the pump setting in the well is changed.

14. The permittee must notify the Department in writing of any change of contact person, address, or phone number that is contained in the application received August 22, 2001.

15. Upon presentation of credentials the Board or Department, or any duly authorized agent, shall have the power to enter, at reasonable times and under reasonable circumstances, any establishment or upon any property, public or private, located anywhere in the Commonwealth for the purposes of obtaining information, conducting surveys or inspections, or inspecting wells and springs to ensure compliance with any permits, standards, policies, rules, regulations, rulings and special orders which the Board or Department may adopt, issue or establish to carry out the provisions of the Ground Water Management Act of 1992 and the Ground Water Withdrawal Regulation.

Part II
Special Conditions

1. **Withdrawals from individual wells are limited as follows:**

Maximum Pumping Rate

Group Number	Model Cell Row	Model Cell Column	DEQ Well Number	Captain's Cove Well Name	Aggregate Limit per Cell Gallons/Year
1	26	72	100-00165	Well # 1	25,066,910
2	24	73	100-00031	Well # 2	8,894,710
3	23	69	100-00039	Well # 3	21,023,860
			100-01072	Well # 3U	
4	23	74	100-01020	Well # 4	25,875,520
			100-01073	Well # 4U	

2. **Mitigation Plan**
The Mitigation Plan, as described in the application received August 22, 2001 and subsequently amended, is incorporated into this permit and included as Attachment B. Requirements in the Mitigation Plan and subsequent revisions shall have the same effect as any condition contained in this permit and may be enforced as such.

3. **Health Department Permit**
Daily withdrawals shall be consistent with the requirements and conditions of the Virginia Department of Health Waterworks Operation Permit 3001100. The permittee shall submit copies of WWOP and the associated Engineering Description Sheets to DEQ within 30 days of an upgrade.

4. **Additional Wells**
A minor amendment to this permit must be made to include additional wells. Additional wells may be permitted under a minor amendment if the total withdrawal does not exceed the permitted amount contained in this permit, the withdrawal from all additional wells originates from the Upper or Middle Yorktown Eastover Aquifer, and the location of the wells are approved by Department staff prior to construction. Additionally, a complete suite of geophysical logs (Spontaneous Potential, Single Point Resistance, 16/64 Short and Long Normal, Natural Gamma) shall be submitted to the Groundwater Withdrawal Permitting Program prior to setting the pump intake.

5. **Observation Well Construction**
Within three years of the effective date of the permit, the permittee shall commence planning for construction of an observation well at the Well 1 Facility. Well construction shall be completed by the end of the fourth year after the effective date of the permit. The target aquifer shall be the Lower Yorktown-Eastover aquifer. Prior to preparation of the bid documents for construction of the well, Captain's Cove Utility Company, Inc. shall notify the Department's Ground Water Characterization Program (GWCP) and shall include any GWCP requirements in the bid documents. At a minimum, the GWCP will require that at least two weeks prior to the scheduled construction of the well, the permittee notify the Tidewater Regional Office of the DEQ of the drilling timetable. Completed water well construction reports shall be submitted to DEQ within 30 days of the completion of the well. Additionally, geophysical logs (Spontaneous Potential, Single Point Resistance, 16/64 Short and Long Normal, Natural Gamma) shall be completed for the well and submitted with the well construction report. All geophysical and

geologist's logs shall be referenced by the DEQ well number that will be assigned during preparation of the bid documents.

6. **Water Quality Monitoring**
The permittee shall collect a groundwater quality sample from Well #1 (100-00165) completed in the *Middle Yorktown Eastover Aquifer,* Well #1U (100-01071) completed in the *Upper Yorktown Eastover Aquifer,* Well #4 (100-01020) completed in the *Middle Yorktown Eastover Aquifer* and the observation well to be constructed in the *Lower Yorktown-Eastover Aquifer* on a quarterly basis. Prior to collecting the samples, the wells shall be pumped sufficiently to withdraw at least three well volumes and the Ph, temperature, and conductivity of the discharge shall be stabilized. The sample shall be analyzed for, at a minimum, chloride, sulfate, alkalinity, fluoride, calcium, magnesium, zinc, sodium, iron, and potassium content, and an anion-cation balance (as described in Part 1030 F.1 of "Standard Methods for the Examination of Water and Wastewater") shall be performed on the results. A report of the results shall be submitted quarterly with the withdrawal reports required in Condition 3 of Part I - Permit Standards, Limitations and Conditions. Records of groundwater quality sampling results including documentation of Ph, temperature, and conductivity stabilization prior to sampling shall be maintained by the permittee as required in 9 VAC 25-610-130.F. of the Ground Water Withdrawal Regulation.

Water quality analyses with cation-anion imbalances greater than the recommended limits as described in the Standard Method are considered suspect and the reason for the excessive imbalance must be explained in writing by the laboratory at the time of report submittal or the sample re-tested or the well re-sampled and tested within 30-days of the initial test result that fell outside of the recommended limits. DEQ reserves the right to require a re-test or re-sample and test after review of the laboratory's explanation for the excessive imbalance.

7. **Water Quality Reopener**
If the monitoring information required in Condition 6 above, indicates the potential for adverse impacts on groundwater quality due to this withdrawal, this permit may be reopened to include groundwater quality action levels.

8. **Pump Intake Settings**
Pump settings in individual wells are limited as follows:

Owner Well Name	DEQ Well#	Max Pump Setting (ft below land surface)
Well 1	100-00165	220
Well 2	100-00031	125
Well 3	100-00039	237
Well 3U	100-01072	125
Well 4	100-01020	220
Well 4U	100-01073	120

The permittee may provide additional information regarding the depth of the tops of the *Upper and Middle Yorktown Eastover* Aquifers to justify pump settings different from those listed above. Any change in the pump settings must receive prior approval by staff of the Department of Environmental Quality and be included in this permit as a minor amendment.

9. **Well Abandonment**

Within one year of the effective date of the permit, the permittee shall properly abandon the unused wells listed below in accordance with the Virginia Department of Health's Waterworks Regulations and submit documentation to the Department of Environmental Quality. At least one week prior to permanently abandoning the wells, the permittee shall notify the Department of Environmental Quality of the scheduled well abandonment date.

Owner Well Name	DEQ Well#
OW-1	100-00996
OW-2	100-00997
OW-3	100-01018
OW-3U	100-01059
OW-4	100-01019

10. **Permit Reopener**

This permit may be reopened if the issuance of groundwater withdrawal permits required by the Ground Water Management Act of 1992 for existing permitted or certificated users indicate that the basis used for predicting compliance with regulatory drawdown criteria was inaccurate.

ATTACHMENT A

WATER CONSERVATION AND MANAGEMENT PLAN

WATER CONSERVATION & MANAGEMENT PLAN

REGULATORY REQUIREMENTS

In 1992, Virginia adopted the Groundwater Management Act (Title 62.1, Chapter 25, code of Virginia, 1950, as amended) regulating groundwater withdrawals in critical aquifer use areas. The Eastern Virginia and the Eastern Shore Groundwater Management Areas were established at that time due to a decline in groundwater levels of up to 200 feet in some places due to excessive groundwater use. In these management areas, a groundwater withdrawal permit is required for any application to initiate a new withdrawal or expand an existing withdrawal in the groundwater management area. As part of the Ground Water Withdrawal Permit (GWWP) application, a Water Conservation and Management Plan (WCMP) must be submitted with the GWWP application and becomes an enforceable part of the GWWP permit. In accordance with 9VAC25-610-100, a WCMP must include at a minimum the following items.

- The use of water saving plumbing and processes including, where appropriate, the use of water saving fixtures in new and renovated plumbing as provided in the Uniform Statewide Building Code;
- A water loss reduction program;
- A water use education program;
- An evaluation of potential water reuse options; and
- Requirements for mandatory water use restrictions during water shortage emergencies declared by the local governing body.

THE NEED FOR WATER CONSERVATION

Water conservation is a focused effort by a water user to reduce the use of water. This effort can minimize development of new resources and reduce the cost of future water service. Each gallon of water that is not used through conservation is one less that needs to be stored, treated, pumped and distributed. The reduction in the use of water may also result in energy savings if the water needs to be heated for washing or bathing or pass through a wastewater treatment system before it is returned to the environment.

Water conservation has reached a new level of awareness. Conservation may represent a practical alternative to developing and increasing the water supply or at least complement new water supply development projects until technologies evolve to meet the needs of an ever growing population. Clean water supplies, like other natural resources, are a limited resource, which must be managed carefully so that they are preserved for future generations. Efforts to conserve existing supplies and the efficient allocation of water resources need to be made at each stage of the water supply planning process.

OBJECTIVES

The objective of the Water Conservation and Management Plan is to develop a documented, effective conservation and management strategy that is designed to minimize the demand for groundwater and comply with 9VAC25-610. The plan consists of operational programs and strategies that will be used every day in the management and maintenance of the water and wastewater utility. The specific conservation and management strategies are presented in the following sections and are briefly summarized in the conclusion.

CONSERVATION MEASURES AND MANAGEMENT STRATEGIES

Captain's Cove Utility Company, Inc. ("CCUC" or "Utility") supplies water to the Captain's Cove subdivision in Accomack County, Virginia. The subdivision is located in Greenbackville off of State Route 679. The Utility supplies drinking water to the residential development from supply wells. The Utility also operates a wastewater treatment plant which serves a portion of the development. The development also includes lots which utilize drainfields for wastewater management.

Water Saving Plumbing and Processes

All new service connections (new construction) are required to incorporate the use of water saving fixtures as required in the Uniform Statewide Building Code. In addition, existing customers requesting service termination for plumbing renovations will be informed of the requirement that all plumbing modifications made shall incorporate the use of water saving fixtures as provided in the Uniform Statewide Building Code.

Captains Cove Utility will also encourage the use of low-flow plumbing devices and water fixtures to their existing customers. Replacing older showerheads with low-flow fixtures, installing faucet aerators in older baths and kitchens, and water saving flappers in older toilet tanks can reduce household water use by approximately 10 to 15 percent.

Water Loss Reduction

Water loss or unaccounted-for water is the difference between water produced and the quantity of water paid for by final consumers. Because individual residential connections are not currently metered, water loss is difficult to measure. Water use is routinely monitored at each source. This allows for routine assessment of water usage and can be used to gauge potential water losses based upon facility water use records. Excessive water use is investigated when demand in excess of that anticipated is recorded. In addition, all supply system leaks are repaired when detected and the volume of water utilized in system maintenance flushing operations is kept to the minimum required for acceptable system operation.

In the near future, Captains Cove plans on requiring all new hook-ups to be metered and will implement a program to install meters on all existing connections. This will allow better auditing of unaccounted for water and quicker detection of leaks. Once the system is metered, a program of periodic water audits and leak detection measures will be used to reduce water loss and produce more effective water conservation efforts. The goal of the water utility is to reduce unaccounted for water to between 10-15 percent or less of average daily water use. If unaccounted for water is greater than 15 percent, then the follow actions will be taken.

Unaccounted for Water Analysis

The water distribution will be tested for leaks using the comparison of system water meters and the pump house master meter; thus, an unaccounted for water analysis will show any major leaks or discrepancies. For the purposes of this plan, the unaccounted for water analysis will occur annually at a minimum to establish the system base line for error within metering equipment. In addition, potential discrepancies between the amount of water produced and the amount sold to customers will be reviewed on a monthly to bimonthly basis once the majority of homes are metered. The current billing system will be modified and upgraded to assist in analyzing water usage and detecting possible leaks. Utility operators will also be able to detect leaks on the basis of daily and weekly review of water use data including well pump operational logs and wellhead meter readings which can detect possible leaks by a general comparison to typical seasonal water use. More frequent reviews may be possible as new technologies are implemented within the meter reading systems.

Water System Leak Detection And Repair

If a leak in the system occurs, it will be fixed within 24 hours. If the usage data or unaccounted for water analysis indicates a water leak which cannot be visually located, the system must be searched for leaks. Additionally, exceptionally high usage at customer's meters must be also be reviewed from billing department data. The location of leaks in the distribution system and the success of a repair program depend on the following factors:

- Pipe age and material;
- System operating pressures;
- Soil Type;
- Soil pH; and
- Pipeline depth

Generally, the initial searches for leaks include walking the system lines and looking for puddles or wet areas that could hint of a leak. For subsurface leaks in well drained soils, electronic equipment can be employed to triangulate the leak location by sophisticated listening equipment which is analyzed by a computer.

Employees shall inspect all pump station piping for leaks each visit which cause water to be wasted and employees shall notify management of any leaks observed in the pump station or in the distribution system in a timely manner.

The entire distribution system will be visually inspected on each meter reading cycle by walking and driving the system and reviewing the meter locations and searching for apparent leaks. Upon bill generation for customer bills, high usage bills will be reviewed carefully and may be re-read to verify the usage and look for customer leaks.

Upon notification that a leak exists in the pump station or on the distribution system, the leak(s) shall be repaired in a timely manner. Customers are responsible for home plumbing leaks and water usage may be discontinued by the Utility until the repair is made if sufficient water is being wasted, the customer is not responsive, or the home is abandoned.

Customer Leak Detection And Repair

Employees shall observe customers piping which exists in and adjacent to the Utility's facilities during meter reading for leaks on the customers plumbing. Employees shall make note of any leaks observed and report the leaks to the Billing Department of the Utility. The Billing Department shall notify the customer in timely manner that a leak has been observed on their plumbing. The Billing Department will also notify a customer in a timely manner if abnormally high usage is indicated on the account which could indicate a possible leak.

Water Use Reduction through Future Rate Structures

Water billing can be used as a means to disseminate water conservation information to water users and to provide incentives to customers to use water efficiently. Once the system is metered, the Utility will adapt conservation-based water rate structures to further promote water conservation. Conservation-based rate structures such as flat rates, increasing block rates, seasonal rates, or quantity-based surcharges encourage water conservation and discourage wasteful water use. Increasing rate structures are most effective and allow for average water use at a reasonable rate. However, above an allowable amount of normal household water usage, the rates become higher per unit of water used. Residents who use large amounts of water each month for irrigation would pay substantially more than residents who do not.

Water Use Reduction through Water Use Education

A comprehensive public education program serves to inform the community of the many benefits of water conservation and will increase the effectiveness of the water conservation program. The Captain's Cove Homeowners Association will be provided with information regarding water use and water conservation. The Utility will periodically provide an education program encouraging conservation practices at regularly scheduled meetings. Consumers will be encouraged to minimize the use of water. In addition, water bills will routinely include inserts regarding water conservation practices. The goal of the water use education program will be to make the customer understand their water sources, the costs of supplying the water to the customer, the

problems associated with supplying water, and how changes in consumer behavior can lower the cost of supplying water and result in a lower water bill for the customer.

Outdoor Water Use

Outdoor water use increases significantly during the summer months primarily due to increased seasonal population and lawn and garden irrigation. The Utility has to build excess source and storage capacity and infrastructure to meet peak summertime demand. As part of the water use education program and through conservation-based rate structures, the Utility will help reduce excessive outdoor water use and promote better conservation and management practices by the customers. Developing proper grass watering practices and encouraging the use of drought tolerant landscaping can greatly reduce irrigation demands. Watering less frequently can better establish root systems, which make grass and shrubs more drought tolerant.

In addition, Captain's Cove has restrictive covenants which prevent individual home owners from installing wells on their lots for non-potable outdoor uses such as lawn watering and car washing.

WATER REUSE EVALUATION

All of the wastewater generated by this residential development is "returned" to the groundwater onsite through treatment and disposal at individual domestic septic systems or through a centralized wastewater treatment system and infiltration basins. As part of the new wastewater treatment expansion, Captain's Cove will evaluate the reuse of high quality treated wastewater. The wastewater generated may be able to be used for irrigation purposes on the golf course, if the ground surface can be irrigated without runoff to the bay or tributaries.

MANDATORY USE REDUCTIONS

During periods of water shortage emergencies, declared by the local governing body, DEQ Director, or Captain's Cove Utility Co., Inc., customers will be notified in writing that there is a water shortage emergency and that water use reductions or restrictions are mandatory. Captain's Cove Utility Co., Inc. will be responsible for enforcing penalties, such as imposing fines to customers using water for restricted purposes during water shortage emergencies. Requirements for mandatory use reductions during local or regional water shortage emergencies typically involve local ordinances, which detail restrictions and penalties that may be applied during a declared water shortage emergency.

In the event a water shortage and an emergency is declared by the local governing body or the director of DEQ, all water usage shall be ceased except for sanitary and human consumptive uses.

Emergency Use Procedures

Use restrictions are conservation measures that are employed to produce short-term water demand reductions during water supply emergencies. These are instituted to create immediate reductions in water usage and carry either a long-term or short-term cost to customers. When restrictions are removed, habits formed tend to linger for a time and, to some extent, can have a lasting impact on water use.

Use restrictions must be clearly differentiated from normal conservation programs. While use restrictions are considered a form of conservation because they result in demand reductions, they are addressed separately from normal conservation because they are only implemented during periods when the water supply is threatened. As a result, the savings associated with the implementation of use restrictions should not be incorporated into the planning of future water supplies. Rather, such restrictions are reserved as contingency measures for emergencies (e.g., drought) and are more severe than those used to determine the long-term water supply deficit.

Use restrictions are commonly implemented using the following tiered approach. Tier 1 is activated during the initial stages of a water shortage. Voluntary use restrictions are encouraged by the water utility, but compliance is not required.

When water supplies become further stressed, Tier 2 restrictions are implemented. At this tier level, mandatory use restrictions are implemented according to local ordinances. Restrictions are enforced and penalties for violations are incurred. The final tier, Tier 3, is implemented only under the most serious water shortages and employees water rationing.

The conditions that warrant implementation of each tier are normally related to specific storage levels in the raw water system. Once the tier levels are developed, an ordinance would be required to define use limits and to specify enforcement of the restrictions.

The following types of use restrictions are examples that could be employed during each of the three tiers to ensure an adequate level of protection during water shortages.

Tier 1 – Voluntary Use Restrictions (Drought Watch)

Voluntary use restrictions are employed as a first stage in reducing water demands during a potential water shortage. These constraints are designed to limit water use for a potential water shortage. These constraints are designed to limit water use for nonessential uses, such as outdoor water uses, (e.g., car washing and lawn watering).

Several different measures can be used to minimize outdoor water use. Odd-even watering is a common water use restriction. This measure requires that only those homes with even-numbered street addresses may irrigate their lawn on even-numbered calendar days, while the same rationale applies to odd-numbered addresses. Another alternative is to limit the hours during the day that irrigation is allowed, such as early morning or late evening hours when less water is lost. Time restrictions may be placed on other outdoor water uses as well, such as car washing.

The restriction of water use through voluntary action has been widely employed. Most localities that have established conservation programs encourage reduced water use during peak demand periods and when supply levels begin to fall. Tier 1 restrictions are likely to be accepted by only that portion of the public that understands the purpose and necessity of the restrictions. Therefore, a well-planned public education program must accompany implementation of Tier 1 use restrictions.

Tier 2 – Mandatory Use Restrictions (Drought Warning)

When implementation of Tier 1 does not reduce demands efficiently and water availability declines further, mandatory restrictions are put into effect. Mandatory use restriction programs would include the same measures that are encouraged under Tier 1. The difference is that in Tier 2, compliance is mandated by an ordinance and the restrictions are enforced with penalties.

Tier 2 restrictions would go into effect when the Utility determines that the severity of the situation warrants mandatory restrictions. During a Tier 2 situation, outdoor water use may be restricted or banned as the water supply becomes further threatened. If a particular user has consistently violated the use restrictions, the Utility may discontinue service. With an efficient public education program, the public can be encouraged to report violations of the regulations. This practice helps to enforce the regulations and achieve the program goals.

Limiting the number of new hookups to the system is an alternative form of mandatory restrictions used when growth is threatening the reliability of existing water supplies. Under severe drought conditions, the Utility may be unable to provide efficient service to additional customers. In these cases, the Utility may be unable to provide efficient service to additional customers. In these cases, the Utility prohibits the connection of new construction to the system until additional water supply is available. A drought emergency is not always a prerequisite for implementing these use restrictions. If normal demands threaten to exhaust available supplies prior to the development of new or expansion of existing supplies, a moratorium on new connections may be put into effect.

Many water departments across the Country employ outdoor water codes, both voluntary and mandatory. Virginia's Drought Assessment and Response Plan The first step to the program consisted of mandatory restrictions that banned the use of nonessential uses of water. Nonessential uses were defined to include the following:

- Watering of shrubbery, trees, lawns, grass, plants, or other vegetation, except from a watering can or other container not exceeded three gallons in capacity.
- Washing of automobiles, trucks, trailers, or any other type of mobile equipment, except in facilities operating with a water recycling system approved by the City, or except from a bucket or other container not exceeding three gallons in capacity; provided, further, that any facility operating with an approved water recycling system must prominently display, in public view, a sign stating that such a recycling system is in operation.

- Washing of sidewalks, streets, driveways, parking areas, service station aprons, exteriors of homes, apartments, commercial or industrial buildings or any other outdoor surface, except from a bucket or other container not exceeding three (3) gallons in capacity.
- The operation of any ornamental fountain or other structure making a similar use of water.
- The filling of swimming or wading pools or the refilling of swimming or wading pools which were drained after the effective date of the order.
- The use of water from fire hydrants for any purpose other than necessary governmental operations.
- The serving of drinking water in restaurants, cafeterias, or any other establishments, unless requested to do so by the individual being serviced.

These restrictions are brought into effect when the locality is suffering from a water supply emergency and the restrictions are printed in any newspaper or general circulation in the County, or broadcast upon any radio or television station serving the area. Included in the restrictions is the prohibition of flushing new water mains at constructions sites. Flushing is required following construction to remove debris from the lines before potable water can be delivered. This measure effectively places a moratorium on new water hookups in newly constructed subdivisions.

Tier 3 – Water Rationing (Drought Emergency)

Under severe drought conditions, under authority by DEQ or other governmental body, water rationing can be used as a method to further reduce water usage. With water rationing, the local water utility specifies a per capita amount of water that is allowed for use at the current billing rate. If this amount is exceeded, a surcharge is issued for water used above the allotted amount. This method is implemented if voluntary and mandatory restrictions are unable to reduce demands sufficiently or if water availability declines further. The surcharge applied to water use above the allotment is significant. Because the surcharge is very high, it is a strong deterrent against exceeding the allotment value. Again, a strong public education program is required along with implementation of water rationing. Water rationing is an unpopular alternative for both localities and consumers. It places extreme restrictions on consumer water use and provides a very strong negative incentive for maintaining water usage below the allotted level. The program is not likely to be supported by the consumer because of the high fees incurred for exceeding water limits. However, the program is usually successful at reducing demands if ordinances are in place to enforce the goals.

ATTACHMENT B

MITIGATION PLAN

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MITIGATION PLAN

DEQ GROUNDWATER WITHDRAWAL PERMIT NO. GW0044600

APPLICANT NAME: Captains Cove Group LLC

PERMITTEE NAME: Captains Cove Utility Co., Inc.

LOCATION: 2512 Captain's Corridor, Greenbackville, VA 23356

GROUNDWATER USE: Public Community Water Supply

WELL IDs WELL 1 - DEQ #100-031
WELL 2 - DEQ #100-165
WELL 3 - DEQ #100-454
WELL 4 - DEQ #100-1020
WELL 3U - DEQ #100-1072
WELL 4U - DEQ #100-1073

1.0 INTRODUCTION

Captains Cove Utility Co., Inc. (referred to herein as the "Utility" or the "Permittee") has applied for a Groundwater Withdrawal Permit (#GW0044600) from the Virginia Department of Environmental Quality (DEQ). The permit application has requested a groundwater withdrawal of 148.5 million gallons (MG) per year with an estimated maximum monthly withdrawal of 20.2 MG. Groundwater withdrawal associated with this permit is utilized to supply the drinking water needs for the Captains Cove residential development through 2015. This water will be withdrawn from the confined Yorktown-Eastover aquifer.

The groundwater utilized under the DEQ permit GW0044600 is pumped from permitted public water supply wells serving the community and is routed through individual wellhouse facilities equipped with flow controls, chlorine disinfection treatment, a hydrodynamic tank, and then discharged through a pressurized piping distribution system to homes within the Captain's Cove community.

2.0 PURPOSE

The purpose of this Groundwater Use Mitigation Plan (the "Plan") is to provide existing users of groundwater within a defined zone of influence a method to resolve claims that may arise based on an alleged impact to the existing users as a result of groundwater withdrawal from the Permittee.

The DEQ's technical evaluation indicates that the predicted groundwater drawdown and the Area of Influence (AOI) defined by the 1-foot drawdown contour within the confined Yorktown-Eastover Aquifer extends beyond the Permittee's property boundaries as shown on the attached maps. Due to these findings, the Permittee understands that there will be the rebuttable presumption that reported adverse impacts to existing groundwater users within the area of impact may be due to this withdrawal.

Groundwater users outside the identified impact area may make claims; however, there is a rebuttable presumption that the Permittee has not caused the purported adverse impact. The Permittee proposes this plan to mitigate alleged impacts to existing users and

excludes impacts to, or claims involving wells constructed after the effective date of the groundwater withdrawal permit.

3.0 CLAIMANT REQUIREMENTS AND REVIEW PROCESS

To initiate a claim, the claimant must provide written notification of the claim to the following address:

Contact Name: Thomas Harmon
Title: Utility Director
Permittee: Captains Cove Utility Company, Inc.
Address: 2512 Captain's Corridor
City, State, Zip Code: Greenbackville, VA 23356

The claim must provide the following information:

(a) A deed or other available evidence that the claimant is the owner of the property the well is located on.

(b) Evidence that the well is permitted (if required) as of the date of the plan.

(c) Documentation that the well was constructed and began operating prior to the effective date of the modification of the Permittee's permit.

(d) All available information related to well construction, well depth, pump size, screens, water levels, historic yield, water quality, and the exact location of the well sufficient to allow the Permittee to locate the well on the claimant's property.

(e) The reasons the claimant believes that Permittee withdrawal has caused an adverse impact of the claimant's well(s).

The Permittee will notify the claimant in writing that the claim has been received and that the Permittee is reviewing the information provided by the claimant. The Permittee will then notify in writing the said claimant within five (5) business days if the claim is approved or if additional information is required to proceed with the review. This

notification does not preclude the possibility that additional information may be requested. After review of the information and within fifteen (15) calendar days of receipt of any requested additional information, the Permittee will notify the claimant in writing that:

(a) the Permittee agrees to mitigate the claimed adverse impact and/or reimburse the claimant or

(b) the claim is denied.

If the Permittee agrees to mitigate the claim it will notify the claimant in writing of such intent and will mitigate within 30 calendar days from the date of decision or other such reasonable time agreed upon by both parties.

If the Permittee denies the claim it will notify the claimant in writing and include the following information:

(a) The reason for the denial of the claim

(b) Provide a copy of the Mitigation Plan.

(c) Advise the claimant that they may seek resolution by invoking the procedures set forth in Section 4.0 of the Mitigation Plan.

3.1 Emergency Water Supply

If a claimant within the defined area of impact indicates that they are out of water, the Permittee will then, as a good neighbor and in good faith, accept the responsibility of providing water for human consumption needs within seventy-two (72) hours and to cover the claim review period.

The Permittee reserves the right to recover the cost of such emergency supply if the Permittee or the resolution committee (described in Section 4.0) denies the claim or if the claim is found to be fraudulent or frivolous.

If the Permittee denies a claim and the claimant elects to proceed with the three (3) member committee (as described in Section 4.0), the Permittee will continue the emergency water supply at the claimant's request during the committee's deliberations but reserves the right to recover the total costs of emergency water supply in the case that the committee upholds the denial of the claim.

4.0 CLAIM RESOLUTION PROCEDURES

A claimant may seek resolution as described herein for any claim that has been denied by the Permittee. Resolution of a disputed claim will be administered via a resolution committee. The resolution committee will consist of three (3) members, one (1) representative selected by the Permittee, one (1) representative selected by the claimant and, one (1) representative mutually agreed upon by the claimant and the Permittee.

Any claimant requesting that the committee evaluate a claim should provide the name and address of their representative to the Permittee. Within five (5) business days of receipt of such notification, the Permittee will notify the claimant and claimants' representative of the identity of the Permittee's representative and instruct the representatives to select a third representative within ten (10) business days. Representatives should be either a professional engineer or geologist with relevant experience or be experienced in the field of groundwater hydrology. The Permittee agrees to reimburse the members of the committee for reasonable time spent, at a rate prevailing in the area for experts in the above listed fields, and for direct costs incurred in administering the plan. The claimant may, at their option, choose to provide the reimbursement for the member of the committee selected by the claimant and up to one-half of the reimbursement for the mutual representative.

Within ten (10) business days of selection of the third representative, the committee will establish a reasonable deadline for submission of all documentation it needs to evaluate the claim. Both the claimant and the Permittee will abide by this deadline. Within fifteen *(15)* business days of receipt of documentation, the committee will evaluate the claim. The standards for review and resolution should be consistent with the intent of the Mitigation Committee as outlined in Section 2 of this document. The resolution committee will use sound scientific principles in consideration of the entire hydrogeologic system, including all pertinent inputs and outputs that could impact the system.

The resolution committee will reach a decision by majority vote. The committee will notify the claimant in writing regarding its decision to: (a) deny or (b) approve the claim. If the claim is approved, the Permittee will mitigate the adverse impacts within thirty (30) calendar days of making the decision or as soon as practical.

If the committee denies the claim, the Permittee may seek reimbursement from the claimant for the claimant's committee representative and up to one-half of the 3rd representative on the committee. The Permittee also reserves the right to recover all costs associated with the claim process if a claim is found to be fraudulent or frivolous.

If it is determined by the resolution committee or shown to the resolution committee's satisfaction that one or more wells operating under different mitigation plan[s] other than those owned and operated by the Permittee has contributed to the claimed adverse impact, then the Permittee's share of the costs associated with mitigation will be allocated in proportion to its share of the impact. The resolution committee shall make such a determination after notification of the third party well owner[s], giving the third party well owner[s] the opportunity to participate in the proceedings of the committee.

5.0 PLAN ADMINISTRATION

The Plan shall be administered by the Permittee. Nothing in the Plan shall be construed as preventing the Virginia Department of Environmental Quality Staff from providing information needed for resolution of claims by the committee.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarter 1 2 3 4

Quarterly Ground Water Withdrawal Report

Name of Facility
Captain's Cove Utility Company, Inc.
Owner: Captain's Cove Utility Company, Inc.
Address 2512 Captain's Corridor, Greenbackville
County/~~City~~: Accomack

Name of Operator _____
Position/Title _____
Signature _____ Date _____
Phone _____
Permit # GW0044600 (Expires February 29, 2024)
Note: New Application Due – June 24, 2023

Meter Readings are in _____ (gallons, 100's or 1000's of gallons, cubic feet, etc.)

Month of _____ Year of _____ Total Year to Date from Previous Quarter

Owner Well Number	DEQ Well Number and VWUDS MPID Number	Present Reading	Previous Reading	Total Gallons
1	100-00165 375323075260601			0
2	100-00031 375836075250801			0
3	100-00039 375911075250805			0
3U	100-01072 375911075252872			0
4	100-01020 380006075243701			0
4U	100-01073 375911075252873			0
			Total Gallons This Month	0
			Total Gallons Year to Date	0

Month of _____ Year of _____

Owner Well Number	DEQ Well Number and VWUDS MPID Number	Present Reading	Previous Reading	Total Gallons
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2	100-00031 375836075250801			0
3	100-00039 375911075250805			0
3U	100-01072 375911075252872			0
4	100-01020 380006075243701			0
4U	100-01073 375911075252873			0
			Total Gallons This Month	0
			Total Gallons Year to Date	0

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DEPARTMENT OF ENVIRONMENTAL QUALITY

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